

Condylura cristata (Insectivora: Talpidae)
in the Blue Ridge Province
of Western South Carolina

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The occurrence of *Condylura cristata* in western South Carolina is questionable. Hall and Kelson (1959) and Hall (1981) mapped the distribution of *C. cristata* to include northwestern South Carolina, providing as a marginal record a reference to Penny (1950:83) who, in turn, citing Burnett (1851), places it on record from "Upper South Carolina." Golley (1966:48), on the other hand, did not concur with Hall and Kelson (1959). He cites "Pickens (1928) [who] states Burnett (1851) lists the species from Aiken County." Lee (1987:57), in a very thorough review of all distributional records of *C. cristata* in the southeastern United States, alludes to the "Upper South Carolina" record as "probably from Burnett (1851) who wrote on the fauna of the Pine Barrens of Upper South Carolina. Thus, the record is from the Aiken County area." Curiously, Penny (1950), Pickens (1928), and Lee (1987) all misinterpret Burnett (1851). Pickens (1928:157) actually comments "Burnett says he observed it at Aiken just below the fall line, the southern boundary of the Piedmont." A careful reading of the Burnett reference indicates this not the case. In fact, there is no geographic reference whatsoever in the 1851 Proceedings of the Boston Society of Natural History other than the introductory sentence (page 115) "Dr. Burnett read some notes on the Fauna of the Pine Barrens of upper South Carolina." Immediately following was a list of mammals observed, including *C. cristata*. In the text Burnett does refer twice to the "pine barren region" (Burnett, 1851:115, 116), but makes no further allusion to locality. Even an approximate locality for the Burnett observation is impossible, given the considerable extent of the upper South Carolina Pine Barrens in 1851.

Thus, until now, no records of *C. cristata* are known from the mountains of western South Carolina. We report here on the capture of a single male specimen taken in a 5-gallon pitfall trap at the United States Department of Agriculture Walhalla Fish Hatchery, Oconee County, at 1.5 road miles north along the Fish Hatchery access road from

U.S. 107 (34° 12' 00" N, 83° 04' 11" W). The collection site was a fern glade located in a relatively narrow, steep-walled gorge of the East Fork of the Chattooga River dominated by an eastern hemlock (*Tsuga canadensis*), white pine (*Pinus strobus*), and rhododendron (*Rhododendron maximum*) streamside community which grades upslope into yellow poplar (*Liriodendron tulipifera*), mixed oak (*Quercus* sp.), and hickory (*Carya* spp.). Elevation was approximately 760 m. In addition to the *C. cristata* specimen, six *Sorex fumeus* and four *S. cinereus* were recovered in the pitfall. This collection site is the locality from which the first state records of *S. cinereus* (Laerm et al. 1995) and *Clethrionomys gapperi* (Pivorun et al. 1984) were reported. Additional small mammals reported by Laerm et al. (In press) and Pivorun et al. (1987) include *S. hoyi*, *Blarina brevicauda*, *Peromyscus leucopus*, and *P. maniculatus*.

The star-nosed mole is documented in nearby areas of North Carolina including the mountains "near the border of South Carolina" (Audubon and Bachman 1851) and Clay, Henderson, Macon, Polk, and Transylvania counties (Brimley 1945, Odum 1949, Johnston 1967, Lee et al. 1982, Lee 1987, Webster 1987, Beane 1995). The nearest Blue Ridge locality in Georgia is Union County (Laerm 1981).

Condylura cristata is apparently rare in the Blue Ridge or exceedingly difficult to trap (Clark et al. 1985). Approximately 140,000 pitfall and snap trap nights in western South Carolina by Laerm et al. (1995) and Laerm et al. (In press) have failed to yield another specimen. Lee (1982) noted the absence of *C. cristata* from the Piedmont of North Carolina, South Carolina, and Georgia (see also Laerm 1981) indicating populations in the Blue Ridge to be disjunct from those on the Coastal Plain. However, Beane (1995) mapped undocumented records of *C. cristata* from the Piedmont suggesting a possible continuous distribution from the Coastal Plain to the Blue Ridge. We would not concur that undocumented records are sufficient to justify such a supposition. Golley's (1966:49) map for *C. cristata* indicates a record from the South Carolina Piedmont (Marion County) without supporting comment or documentation, but neither Lee (1982) nor we have been able to confirm this record. In so far as we have been able to ascertain, there are no documented records from the Piedmont of South Carolina. Laerm (1981) noted an unconfirmed report from the Piedmont (Jackson County) of Georgia. The possible occurrence of *C. cristata* in the Piedmont of these states is questionable. We concur with Beane (1995) that efforts be made to provide documentation for the species in areas from which it has not been confirmed.

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LITERATURE CITED

- Audubon, J. J., and J. Bachman. 1851. The quadrupeds of North America. Volume 2. V.G. Audubon, New York, New York.
- Beane, J. C. 1995. New distributional records for the star-nosed mole, *Condylura cristata* (Insectivora: Talpidae), in North Carolina, with comments on its occurrence in the Piedmont region. *Brimleyana* 22:77–86.
- Brimley, C. S. 1944-1946. The mammals of North Carolina. Carolina Tips. Carolina Biological Supply Company, Elon College, North Carolina.
- Burnett, W. 1851. Notes on the pine barrens of upper South Carolina. *Proceedings of the Boston Society of Natural History* 4:115–118.
- Clark, M. K., D. S. Lee, and J. B. Funderburg, Jr. 1985. The mammal fauna of Carolina bays, pocosins, and associated communities in North Carolina: an overview. *Brimleyana* 11:1–38.
- Golley, F. B. 1966. The mammals of South Carolina. Contributions from the Charleston Museum XV, Charleston, South Carolina.
- Hall, E. R. 1981. The mammals of North America. Second edition. John Wiley & Sons, New York, New York.
- Hall, E. R., and K. R. Kelson. 1959. The mammals of North America. Ronald Press, New York, New York.
- Johnston, D. W. 1967. Ecology and distribution of mammals at Highlands, North Carolina. *Journal of the Elisha Mitchell Scientific Society* 83: 88–98.
- Laerm, J. 1981. A survey of the status, distribution, and abundance of potentially threatened and endangered vertebrates in Georgia. Part 4. The mammals. University of Georgia Museum of Natural History Technical Report, Athens.
- Laerm, J., M. A. Menzel, E. Brown, A. Wotjalik, W. M. Ford, and M. Strayer. The masked shrew, *Sorex cinereus* Kerr (Insectivora: Soricidae), and red-backed vole, *Clethrionomys gapperi* (Rodentia: Muridae) in the Blue Ridge Province of South Carolina. *Brimleyana* 22:15–21.
- Laerm, J., W. M. Ford, T. S. McCay, M. A. Menzel, and J. L. Boone. In press. Soricid communities in the southern Appalachians. Southern Appalachian Biogeography Symposium. Virginia Museum of Natural History, Charlottesville.
- Lee, D. S. 1987. The star-nosed mole on the Delmarva Peninsula: zoogeographic and systematic problems of a boreal species in the South. *The Maryland Naturalist* 31:44–57.
- Lee, D. S., J. B. Funderburg, Jr., and M. K. Clark. 1982. A distributional survey of North Carolina mammals. Occasional papers of the North Carolina Biological Survey, Raleigh.

- Penny, J. T. 1950. Distribution and bibliography of the mammals of South Carolina. *Journal of Mammalogy* 31:81-89.
- Pickins, A. L. 1928. Mammals of upper South Carolina. *Journal of Mammalogy* 9:155-157.
- Pivorun, E. B., D. H. Allen, and D. T. Sawyer. 1984. First record of *Clethrionomys gapperi* (Mammalia: Rodentia) in South Carolina. *Journal of the Elisha Mitchell Society* 100:33.
- Odum, E. P. 1949. Small mammals of the Highlands (North Carolina) Plateau. *Journal of Mammalogy* 30:179-192.
- Webster, W. D. 1987. *Condylura cristata parva* Paradiso. Pages 42-43 in *Endangered, threatened and rare fauna of North Carolina. Part 1. A reevaluation of the mammals* (M. K. Clark, editor) Occasional Papers of the North Carolina Biological Survey, Raleigh.

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